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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/722,898	11/26/2003	Lane Smith	P-103786.3 (UTI)	2886

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Daniel D. Chapman, Esq.
JACKSON WALKER L.L.P.
112 E. Pecan Street, Suite 2100
San Antonio, TX 78205

EXAMINER

QIN, JIANCHUN

ART UNIT	PAPER NUMBER
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2837

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10/04/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/722,898	Applicant(s) SMITH ET AL.	
	Examiner Jianchun Qin	Art Unit 2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 9/02/07.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8,11,13-17 and 27-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8,11,13-17 and 27-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Behrenfeld (5,986,196) in view of Law (3,797,355), Koshika et al. (5,339,580) and Hardy (4,325,280).

Regarding claim 8, Behrenfeld discloses a device comprising: a patch (10) comprising (col. 7, lines 11-27 and col. 8, lines 11-19) a resilient, pliable body (29) adhesive (22) to a vibratable drum surface (8) and an integral flexible base (18); and a second patch (10) substantially identical to the first patch (10), the first patch (10) for attaching to the vibratable drum surface (8).

Behrenfeld does not mention expressly: said body is substantially oil-free; said second patch stacking on the first patch; and wherein no portion of the patch is positioned on the vibratable drum surface of the musical instrument at a point of impact.

Law teaches an oil-free patch for damping a vibratable element of a musical instrument (col. 1, lines 51-53; col. 2, lines 42-43).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Behrenfeld to select an oil-free material

such as polyurethane, as taught by Law, for the damping patch such that the drum surface will not be contaminated by the patch after a long-time use, since selecting a well known material on the basis of its suitability for the intended use is a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Koshika et al. teach a vibration damping device, including a plurality of resilient damper pads being vertically stacked (Fig. 1; col. 2, lines 7-8).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Behrenfeld to stack said first and said second patch together, as taught by Koshika et al., in order to provide the damping device with a simplified construction through which the damping intensity can be easily customized by stacking more or less number of the patches vertically (Koshika et al., col. 3, lines 42-46).

Hardy teaches a device for reducing drumhead ring (Abstract), including: a patch comprising a resilient, pliable, adhesive body and an integral flexible base (col. 3, lines 1-16); and applying the patch to a vibratable drum surface of musical instrument wherein no portion of the patch is applied at a point of impact (Figs. 1 and 3).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the inventions of Behrenfeld to apply the patch to a non-impact point of the vibratable surface as an intended use, as taught by Hardy, in order to provide a device which can substantially reduce the drumhead ringing while not interfere with the playing of the drum, and which will present a pleasing appearance on transparent membranes (Hardy, col. 1, lines 50-54).

3. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Behrenfeld in view of Rosthauser et al. (5,723,194), Law and Hardy.

Regarding claim 11, Behrenfeld discloses a percussion device comprising: a drum having an impact surface and a non-impact surface (Figs. 1 and 2A); a patch (10) comprising (col. 7, lines 11-27 and col. 8, lines 11-19) a resilient, pliable body (29); wherein the patch body (22, 29) forms a top adhesive surface (22).

Behrenfeld does not mention expressly: said body is oil-free; the top adhesive surface is oil-free and adhesivable to the non-impact surface of the drum; wherein no portion of the patch is positioned on the vibratable surface of the musical instrument at a point of impact.

Rosthauser et al. discloses a method of making polyurethane coated patch, wherein said patch is oil-free and adhesivable to a flat surface (Abstract).

Law teaches a polyurethane patch positioned on the vibratable surface of a musical instrument (col. 1, lines 51-53; col. 2, lines 42-43):

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Behrenfeld to use polyurethane to make the body of the damping patch, as taught and motivated by Rosthauser et al. and Law, such that Behrenfeld's top adhesive surface can be omitted and the patch would have improved wet-out property (Rosthauser et al., Abstract).

4. Claims 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rosthauser et al. in view of Iiyama et al. (JP02003001648A, machine English translation), Law and Hardy.

Regarding claim 13, Rosthauser et al. discloses a method of making polyurethane coated layers, comprising the steps of: providing a flat surface (col. 13, lines 37-48); applying a polyurethane mix to a flat surface, laying a sheet of base material other than a woven fabric onto the polyurethane mix, and allowing the polyurethane mix to cure (col. 13, lines 37-48, lines 58-62 and col. 15, lines 9-38).

Rosthauser et al. do not mention expressly: releasing the cured polyurethane mix and base material from the flat surface; and applying the cured polyurethane mix and base material to a vibratable surface of musical instrument wherein no portion of the cured polyurethane mix and base material is applied at a point of impact.

Iiyama et al. disclose a method and apparatus for producing polyurethane sheet, and teach the step of providing a release sheet (2) underneath the polyurethane mix (sections 0028, 0029 and 0034), and releasing the polyurethane mix and base material from the release sheet polyurethane mix is cured (Abstract).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teaching of Iiyama et al. in the invention of Rosthauser et al. in order to provide a technically convenient and robust method for producing a polyurethane sheet that contains a polyurethane layer coated on a base material for various usages (Iiyama et al., Abstract and section 0015).

Law teaches a polyurethane patch used as a damping pad positioned on the vibratable surface of a musical instrument (col. 1, lines 51-53; col. 2, lines 42-43).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to apply the inventions of Rosthauser et al. to a patch for damping

a vibratable surface of a musical instrument for intended use, as motivated by Law (col. 1, lines 51-53; col. 2, lines 42-43), in order to provide a vibration damping patch that has improved self-adhesion and wet-out properties (Rosthauser et al., Abstract).

Hardy teaches a device for reducing drumhead ring (Abstract), including: a patch comprising a resilient, pliable, adhesive body and an integral flexible base (col. 3, lines 1-16); and applying the patch to a vibratable surface of musical instrument wherein no portion of the patch is applied at a point of impact (Figs. 1 and 3).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to apply the inventions of Rosthauser et al. to a damping patch for a vibratable surface of a musical instrument for intended use, in particular, to apply the patch to a non-impact point of the vibratable surface in order provide a damping device which can substantially reduce the drumhead ringing while not interfere with the playing of the drum, and which will present a pleasing appearance on transparent membranes (Hardy, col. 1, lines 50-54).

Regarding claims 14-16, Iiyama et al. teach: providing a release sheet (sections 0028, 0029); removing any trapped air from the mix prior to curing (sections 0044 and 0045); cutting the cured/mixed sheet to a pre-selected shape (section 0049).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teaching of Iiyama et al. in the invention of Rosthauser et al. in order to provide a technically convenient and robust method for producing a polyurethane sheet that contains a polyurethane layer coated on a base material for various usages (Iiyama et al., Abstract and section 0015).

Regarding claim 17, the teaching of Iiyama et al. includes: said pre-selected shape is a rectangle (section 0049).

Iiyama et al. do not mention said rectangle has an area between about 1 sq. inch and 12 sq. inches. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to choose an optimum value for the size of the rectangle, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

5. Claims 27 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Behrenfeld in view of Hardy.

Regarding claim 27, Behrenfeld discloses a percussion device (Figs. 1 and 2A) comprising: a drum head having an impact and a non-impact surface (Figs. 1 and 2A); a damping patch (10) comprising a resilient, pliable, adhesive body (22, 29), and an integral flexible base (col. 7, lines 11-27 and col. 8, lines 11-19), wherein the base is foam (col. 7, lines 19-22); wherein the patch includes a top and bottom surface (Fig. 2A).

Behrenfeld does not mention: the patch is positioned on the non-impact surface of the drumhead.

Hardy teaches a patch for reducing drumhead ring (Abstract), wherein the patch is positioned on the non-impact surface of the drumhead (Figs. 1 and 2).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to apply the invention of Behrenfeld onto the underside of a

vibratable surface at a point other than opposite the point of impact as an indeed use, as taught by Hardy, in order to provide a device for substantially reducing the ringing phenomenon associated with a drumhead while not interfering with the playing of the drum and also presenting a pleasing appearance to the drumhead (Hardy, col. 1, lines 50-54), which device can be detachably attached to the vibratable surface (Behrenfeld, col. 7, lines 11-18).

Regarding claim 29, Behrenfeld discloses a device comprising: a patch (22, 29) comprising a resilient, pliable, adhesive body, and an integral flexible base (col. 7, lines 11-27 and col. 8, lines 11-19), wherein the base is foam and substantially oil-free (col. 7, lines 19-22; col. 8, lines 11-19).

Behrenfeld does not mention: the patch is positioned on the underside of a vibratable surface at a point other than opposite the point of impact.

Hardy teaches a patch for reducing drumhead ring (Abstract), wherein the patch is positioned on the underside of a vibratable surface at a point other than opposite the point of impact (Figs. 1 and 2).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to apply the invention of Behrenfeld onto the underside of a vibratable surface at a point other than opposite the point of impact as an indeed use, as taught by Hardy, in order to provide a device for substantially reducing the ringing phenomenon associated with a drumhead while not interfering with the playing of the drum and also presenting a pleasing appearance to the drumhead (Hardy, col. 1, lines

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50-54), which device can be detachably attached to the vibratable surface (Behrenfeld, col. 7, lines 11-18).

6. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Behrenfeld in view of Hardy, as applied to claim 27 above, and further in view of Law.

Behrenfeld in view of Hardy teach the device including the subject matter discussed above except: said body comprises polyurethane.

Law teaches a patch positioned on the vibratable surface of a musical instrument, said patch having a body comprising polyurethane (col. 1, lines 51-53; col. 2, lines 42-43).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Behrenfeld to select a well known material such as polyurethane, as taught by Law, for the patch on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Response to Arguments

8. Applicant's arguments received 04/12/07 have been considered but they are not persuasive.

Regarding claim 8, Applicants argued that "Behrenfeld is not proper prior art, as it is related to properties of impact pads which have not the desirable properties for dampening patches. ... Law teaches positioning, but not adhesiveness, of free patches. ... Nor does Behrenfeld or Law suggest an oil-free material is desirable with drumheads. There is nothing in either Law or Behrenfeld that shows suitability of the disclosure for dampening a vibratable drum surface or the requirements therefor." These arguments are not persuasive. The examiner's position is that: Behrenfeld teaches a patch device having basic structure similar to the one recited in claim 8 except an oil-free body, a second patch stacking on it, and said device being positioned on the vibratable drum surface of the musical instrument at a non-impact point. The combination of Behrenfeld's patch device with Law's teaching of an oil-free damping patch body, Koshika's teaching of stacked damping patches and Hardy's teaching of applying a damping patch to a vibratable drum surface of musical instrument at a non-impact point reads on the claim. The combination is based on an intended use of the

Behrenfeld's patch device as suggested by Hardy, with obvious modifications as taught by Law and Koshika. The combination is therefore proper. The rejection stands.

Applicants further argued that "Koshika is not analogous or applicable.". The argument is not persuasive. The examiner's position is that, in the instant case, what taught by Koshika is the way to increase damping intensity by simply stacking more than one damping patches vertically, not "to look to protecting building structure from earthquakes", that is, to look to the way to solve the same problem although it may not be in the same field of endeavor.

Regarding claim 11, Applicants further argued with respect to the Law reference that "[t]o the extent that Behrenfeld addresses adhesive surfaces that require an adhesive surface, it teaches away from the patch body itself providing the adhesive surface". The argument is not persuasive. Behrenfeld teaches a patch device having basic structure similar to the one recited in claim 11. Behrenfeld does not mention: said body is oil-free; the top adhesive surface is oil-free and adhesivable to the non-impact surface of the drum. Rosthauser et al. teach making polyurethane coated patch, wherein said patch is oil-free and adhesivable to a flat surface. Law teaches a polyurethane patch for damping vibration of the vibratable surface of a musical instrument. The combination of Behrenfeld with the teachings of Rosthauser et al. and Law reads on the claim. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Behrenfeld to use polyurethane to make the body of the damping patch, as taught and motivated by Rosthauser et al. and Law, such that Behrenfeld's top adhesive surface can be omitted

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and the patch would have improved wet-out property (Rosthauser et al., Abstract). The combination is proper. The rejection is therefore maintained.

Applicants arguments regarding claims 13-17 are not persuasive either. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In this case, it is deemed that the combined teachings of the cited prior art references would have suggested to those of ordinary skill in the art a method for manufacturing a dampening patch for application to a vibratable surface of a musical instrument recited in claims 13-17, as delineated in section 4 set forth above in this Office Action.

The rest of the Applicant's arguments are reliant upon the issue discussed above, and are deemed to be non-persuasive as well for the reasons provided above for claims 8, 11, and 13-17.

Contact Information

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jianchun Qin whose telephone number is (571) 272-5981. The examiner can normally be reached on 8am - 5:30pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lincoln Donovan can be reached on (571) 272-1988. The fax phone

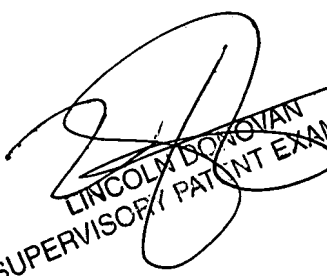
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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jianchun Qin
Examiner
Art Unit 2837

JQ 


LINCOLN DOXOVAN
SUPERVISOR / PATENT EXAMINER